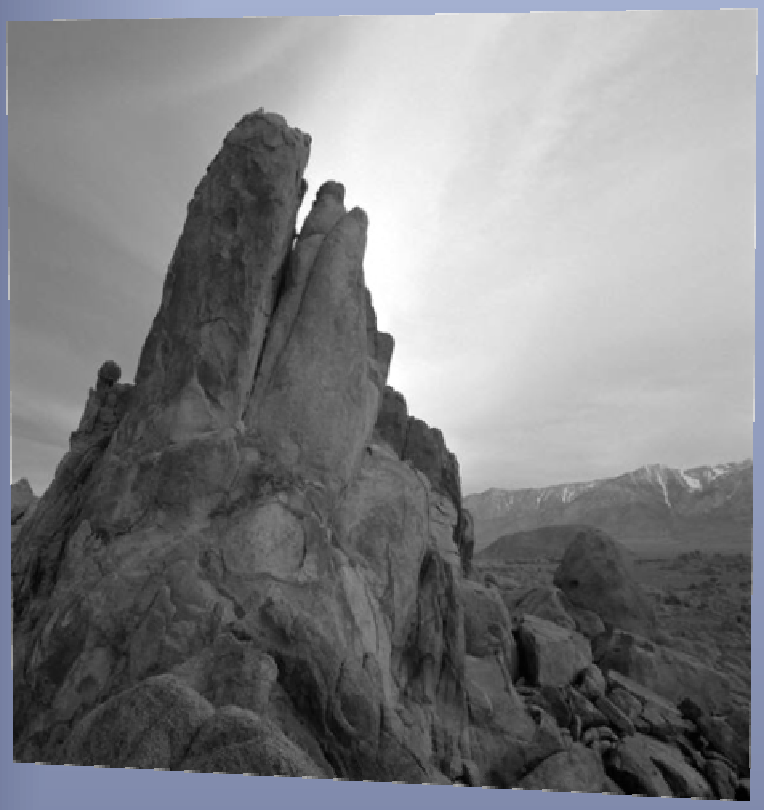

System User's Guide

Focus Project System

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1 Introduction

2 Design Philosophy

The system design is based on the idea that creating a new estimate requires:

An up to date knowledge and experience in preparing similar estimates in the same industry, together with current cost data, and data regarding the issues (eg location, quality, etc) of the particular project.

The knowledgebase models information, which has been gained by years of experience of competent estimators. It enables less experienced estimators to take advantage of knowledge and experience.

Estimate components and line item, have been structured according to industry best practice, with associated labour norms.

3 System Installation and Setup

3.1 Installing the SQL Server Database

The following procedure should only ever be performed once.

1. Create a new database named 'focus' on a networked Microsoft SQL Database Server Version 2005 or later. Note that the system will not run on earlier versions of Microsoft SQL Server.

2. Insert the installation CD into the drive and restore the file focus.bak to the new database.

3. Create a new server logon normally named 'team' that has dbowner rights and an appropriate password.

4. Create a new focus database user named 'team' associated with the logon 'team' (or other name if desired).

Note that the 'team' user logon and password, as well as the server registration name, will be required to configure the windows client application.

3.2 Installing the Windows Client Application

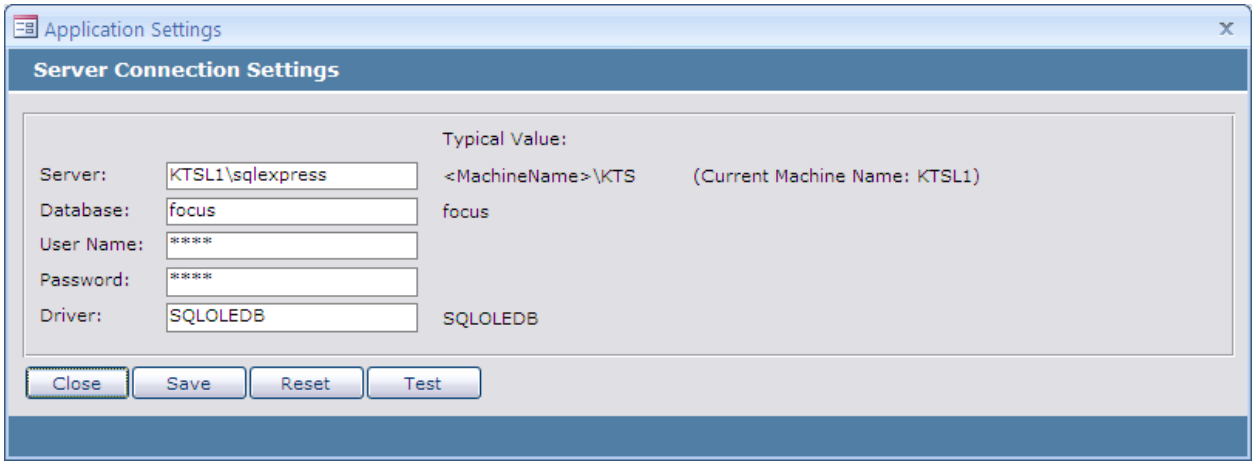
Unzip the file focus_fe.zip to a temporary folder, which contains the following files.

- KTSFocus_Client.msi
- autorun.inf
- setup.exe
- setup.ini
- AccessRuntime.exe

1. Run the file setup.exe and follow the prompts.

2. Run the client application.

3. Select **Application Settings → System Settings → Server Connection** and update and save the SQL Server details (server name, logon, password) for the application.



3.3 Installing Software Upgrades

Unzip the file focus upgrade zip file to a temporary folder.

Run the file setup.exe and follow the prompts.

The upgrade code:

1. copies existing configuration files to a temporary folder
2. uninstalls the old version
3. installs the new version
4. copies configuration files back to the appropriate location, in C:\Program Files\Focus.

3.4 Installing Project Focus on a new PC

Follow the steps for **Windows Client Application** in the First Time Installation section and then install the latest upgrade by following the steps in **Installing Software Upgrades**

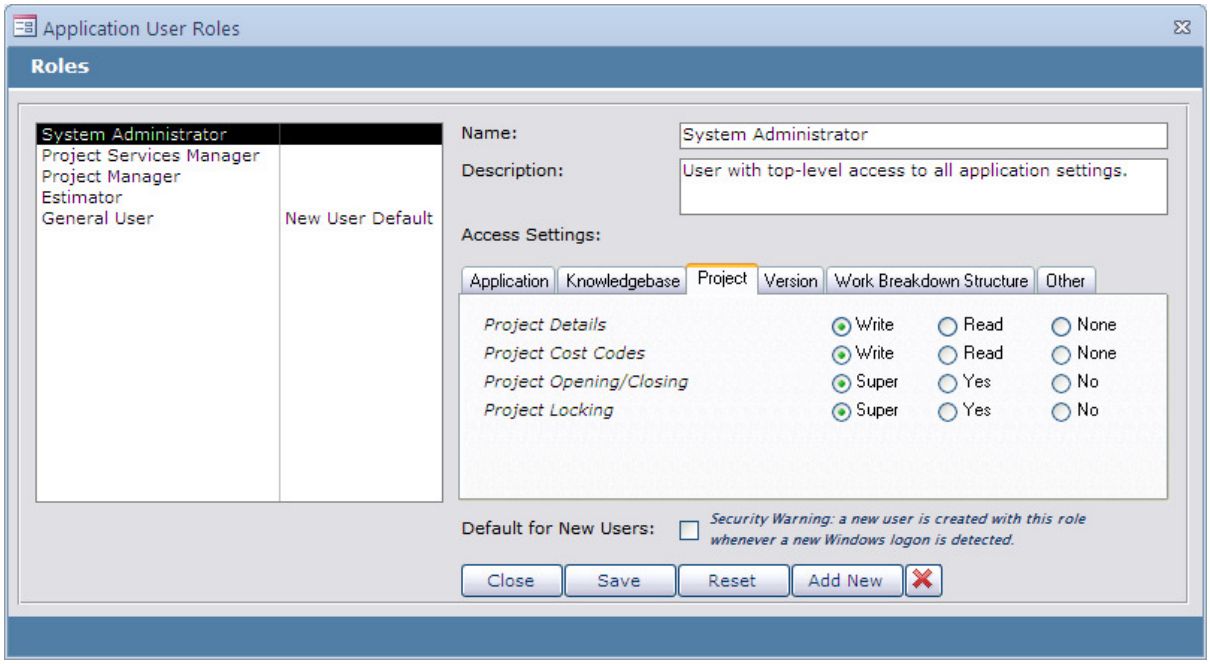
4 Application Settings

4.1 Users and Roles

The user who installs the front-end application for the first time is automatically given 'Administrator' rights. Until other administrators are created this user is then the only person who can add new users, including administrators. However, new users can be added directly into the database table APPUSER by anyone who has write access to the database.

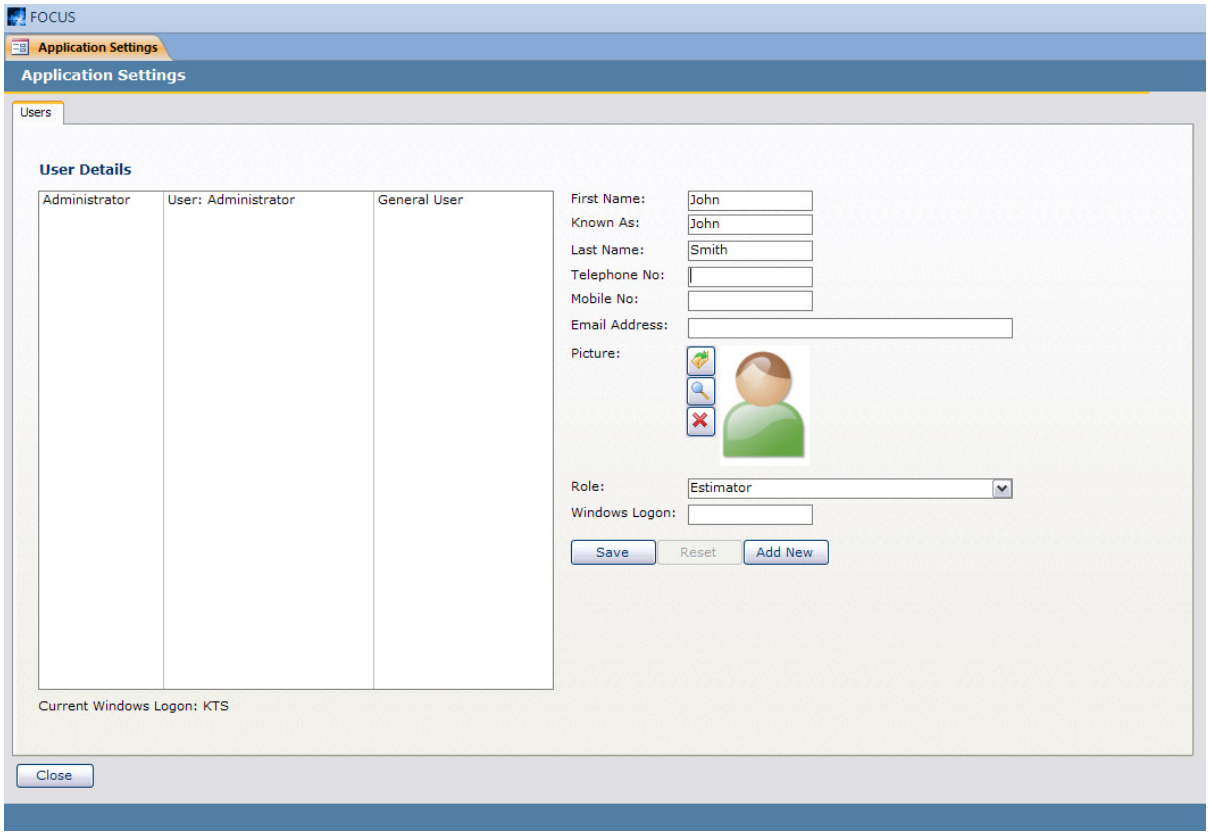
The 'Administrator' role's profile enables any assigned user to carry out any system function, which icludes user and system settings. Normally, only an 'Administrator' will be given rights to add or change users and role profiles. However, any users can update their own details, other than their 'Role' or 'Windows Logon'.

4.1.1 Adding and Modifying User Roles



4.1.2 Adding and Modifying Users

To access and change user details click on the **Users** tab is selected on the **Application Settings** form. The following form is displayed.



To create a new user, select **Add New** and enter the user's details. Select **Save** to create the new user or **Add New** to clear all fields and start again.

Note:

1. You must enter their **First Name** and **Last Name** as a minimum.
2. If no role is assigned they will be assigned the **Guest** role.
3. If no **Windows Logon** is entered the user will not be able to access the system.
4. A Focus user will be automatically created, under their Windows logon, for any user accessing the Windows client application and will be assigned the **Guest** role.

4.1.3 Updating an Existing User

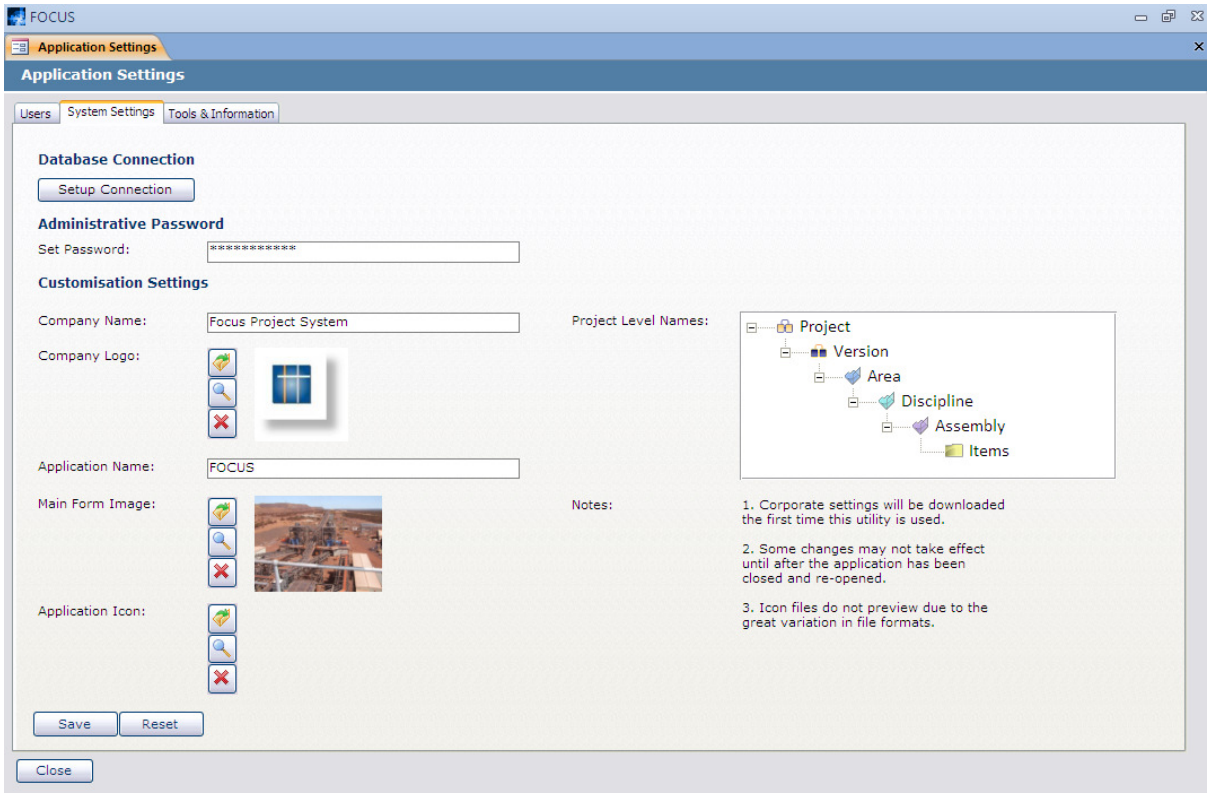
Select a user from the list and modify the user's details as required. Select **Save** to update the user or **Reset** to abandon the changes.

4.1.4 Adding or Changing a Pictorial Identity for a User

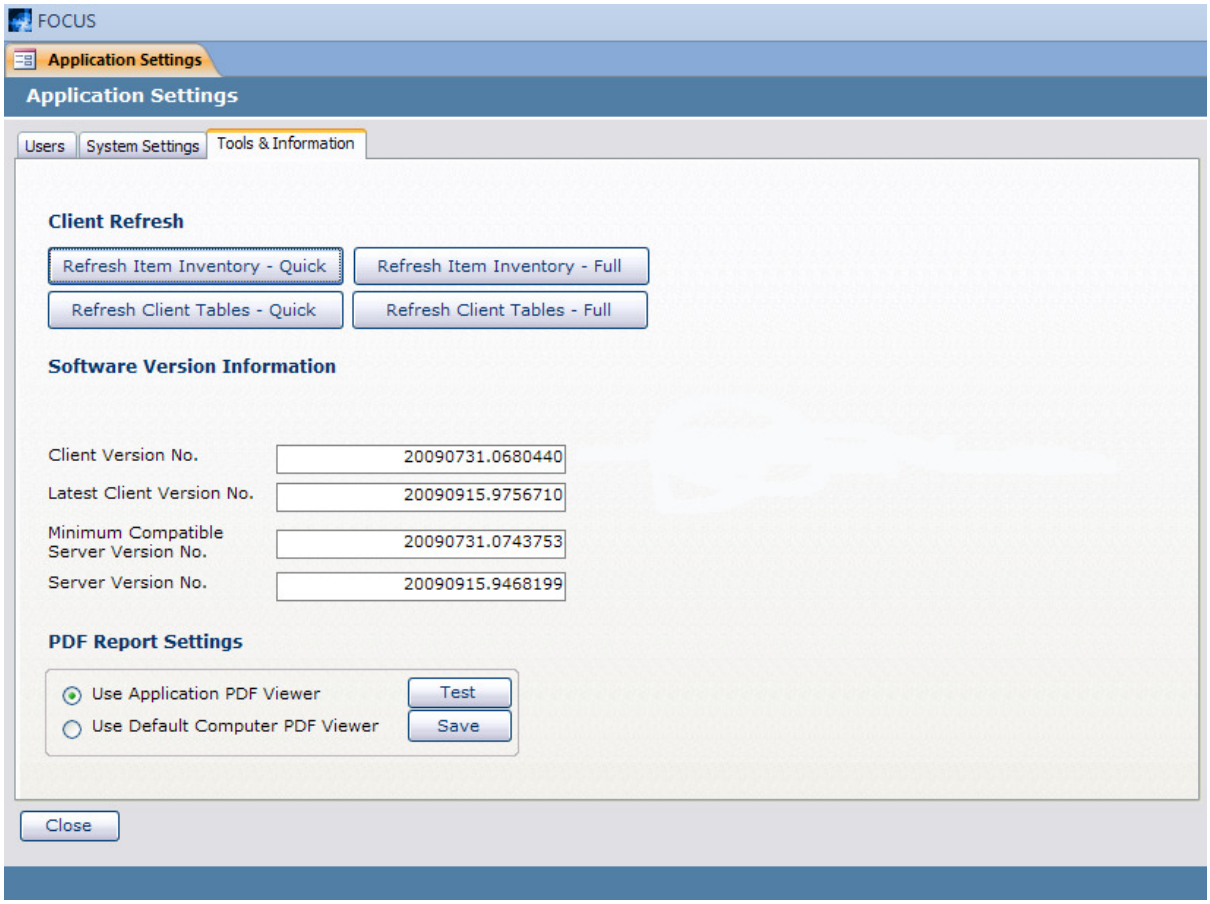
Each user can have a picture file associated with them. If no picture file has been uploaded a default picture is displayed on the form, as shown above.

To browse and attach a picture file select the folder icon. Browse to the required

4.2 System Settings

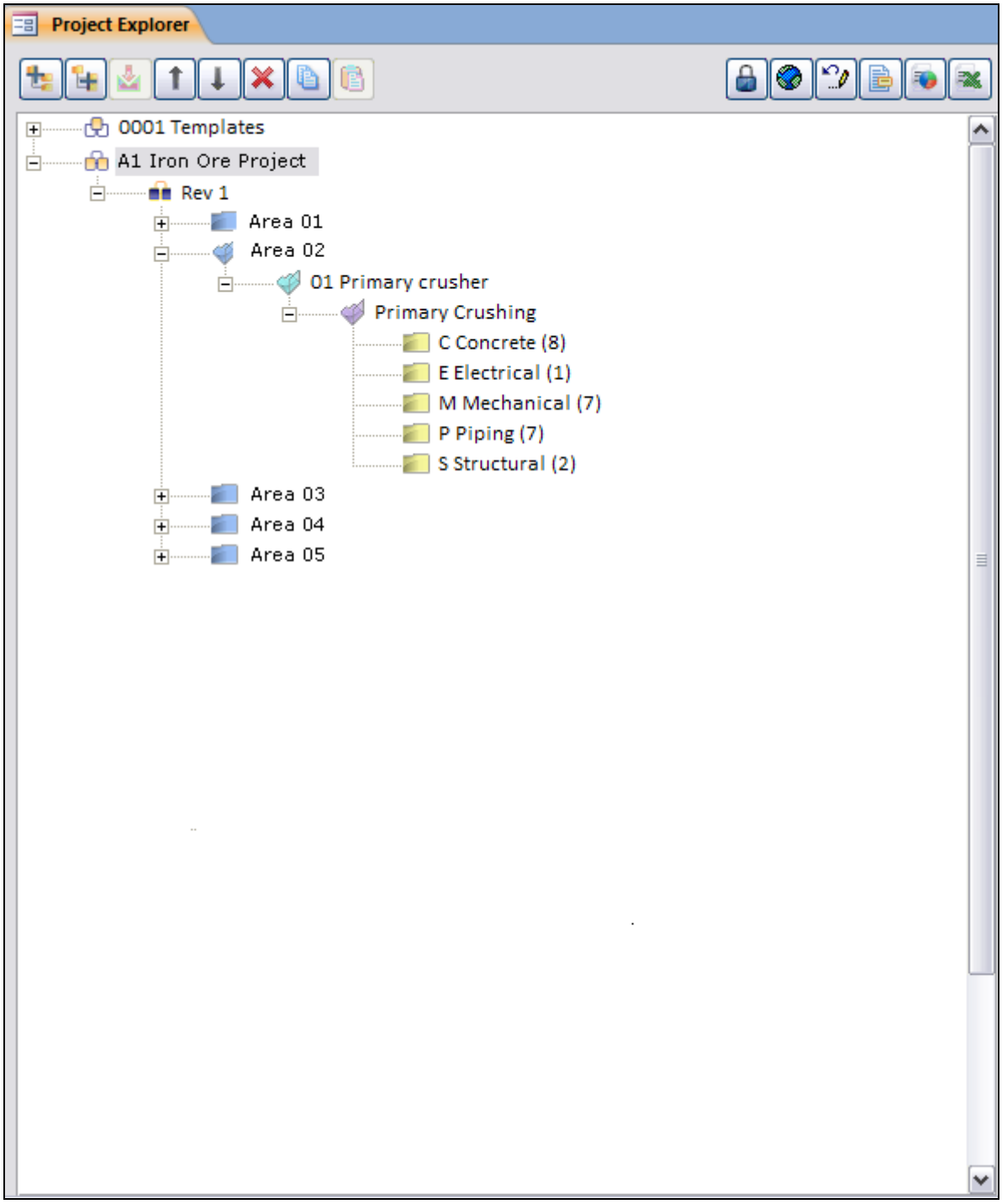


4.3 Tools and Information

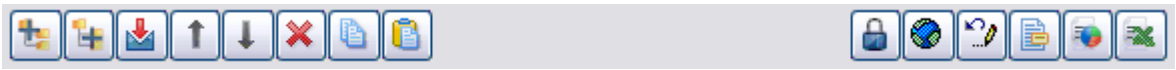


5 Managing Project Estimates

5.1 Project Explorer



5.2 Project Explorer Toolbar



Add a new sibling node

Add a new child node

Opens up a module

Shift sibling node up

Shift sibling node down

Delete a node

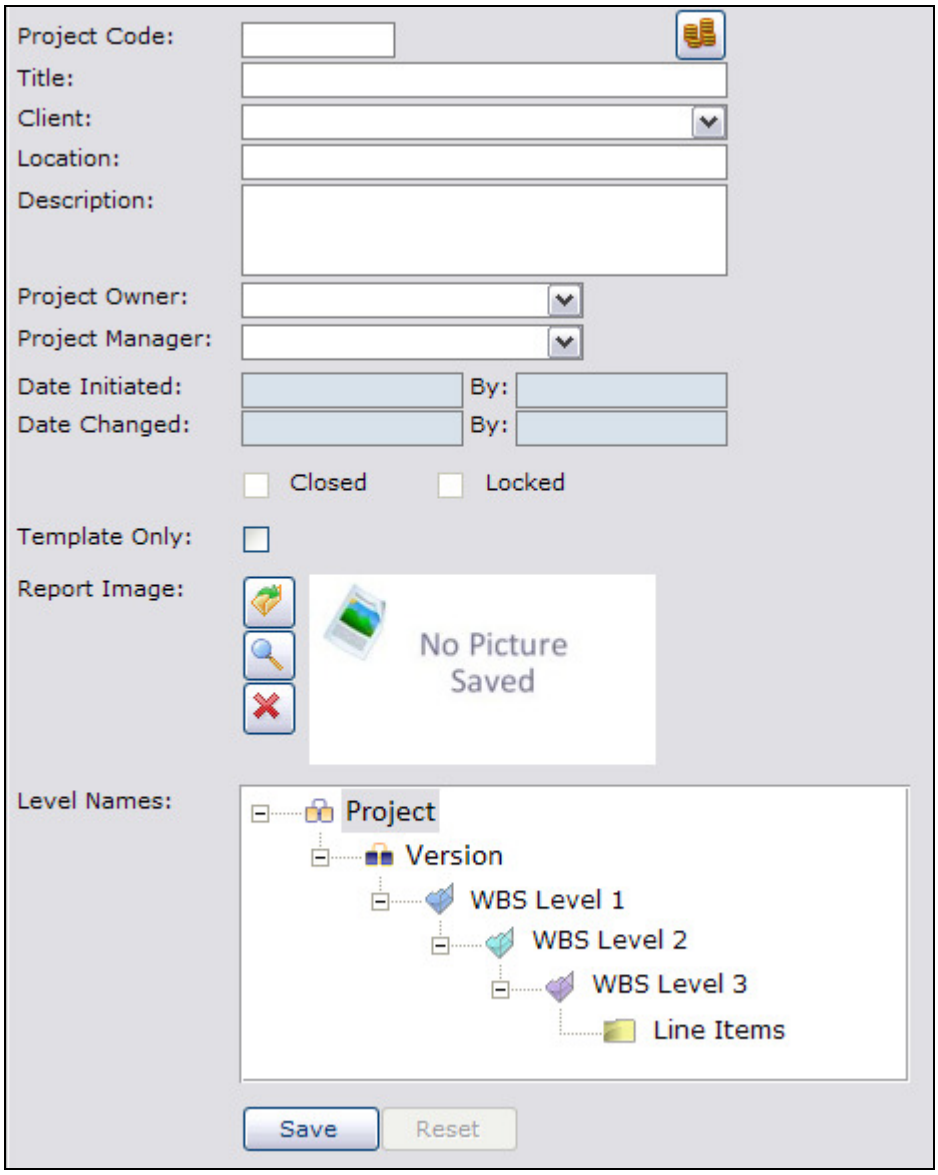
Copy a node

Paste a node

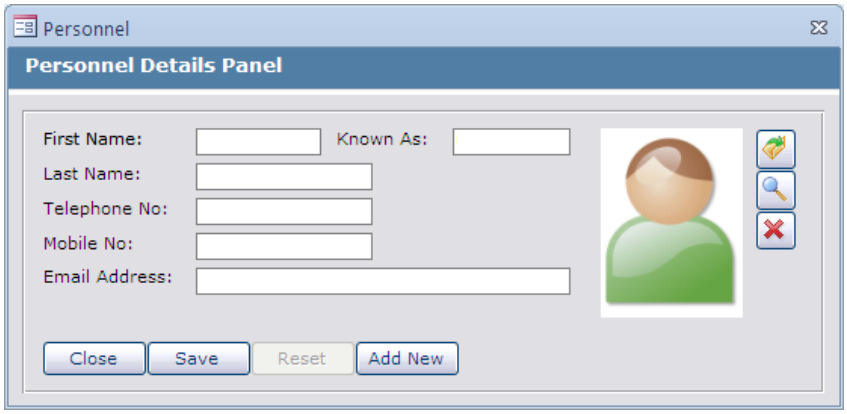
Lock a node

Global Change

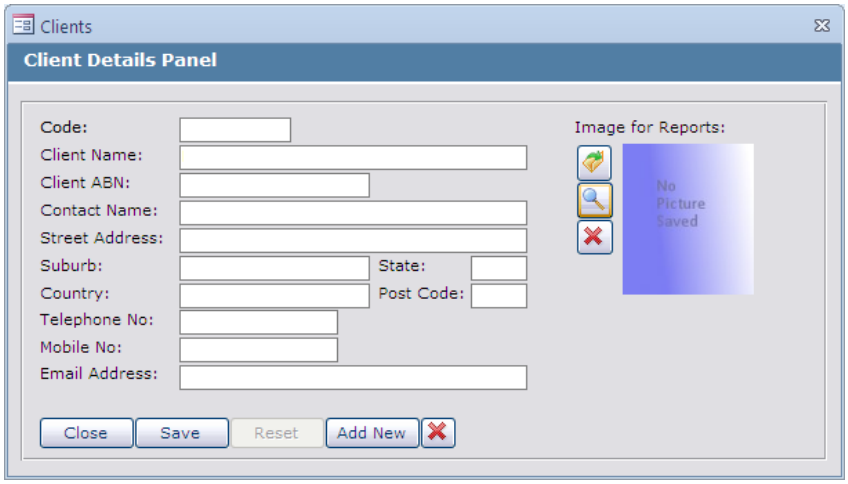
5.3 Projects



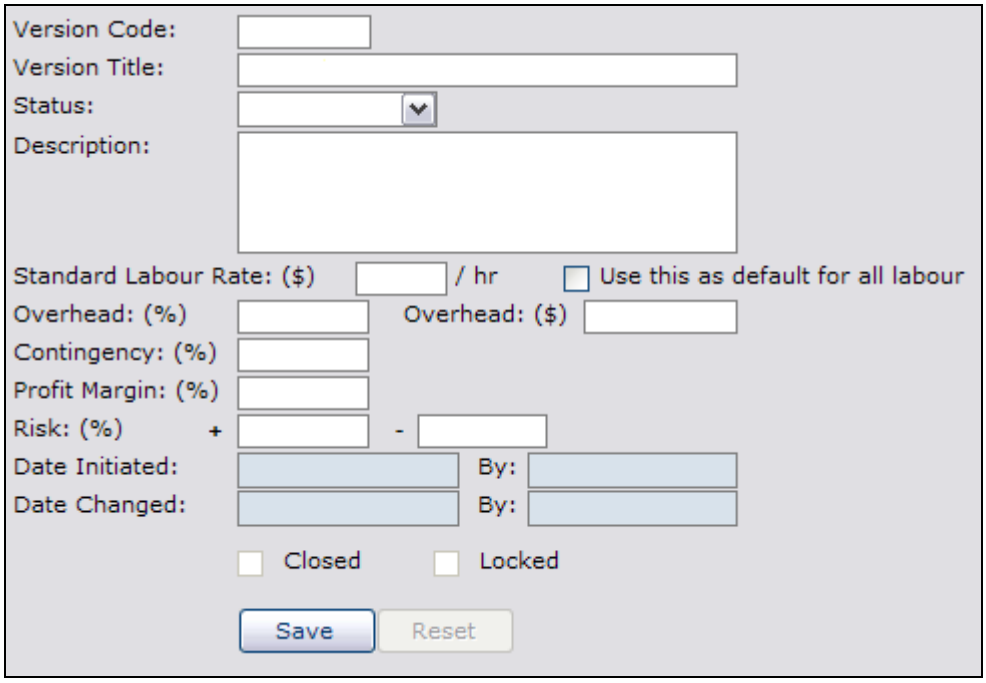
5.4 Add or Update Project Personnel Details



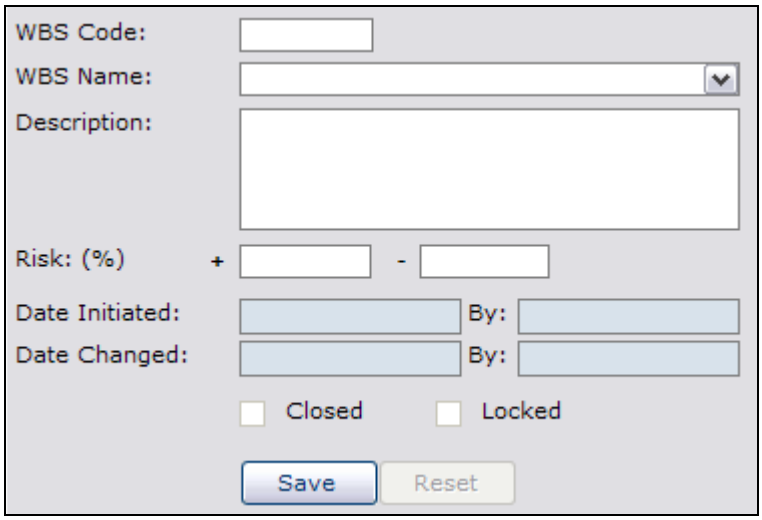
5.5 Add or Update Client Details



5.6 Versions

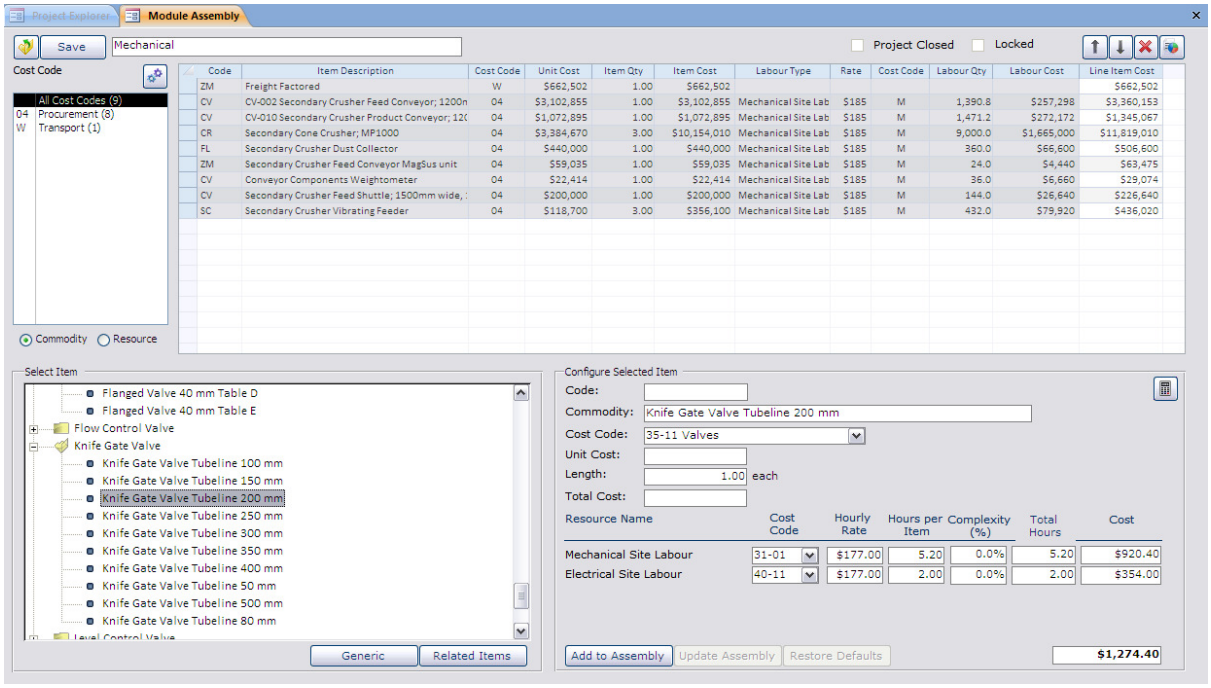


5.7 Work Breakdown Structure

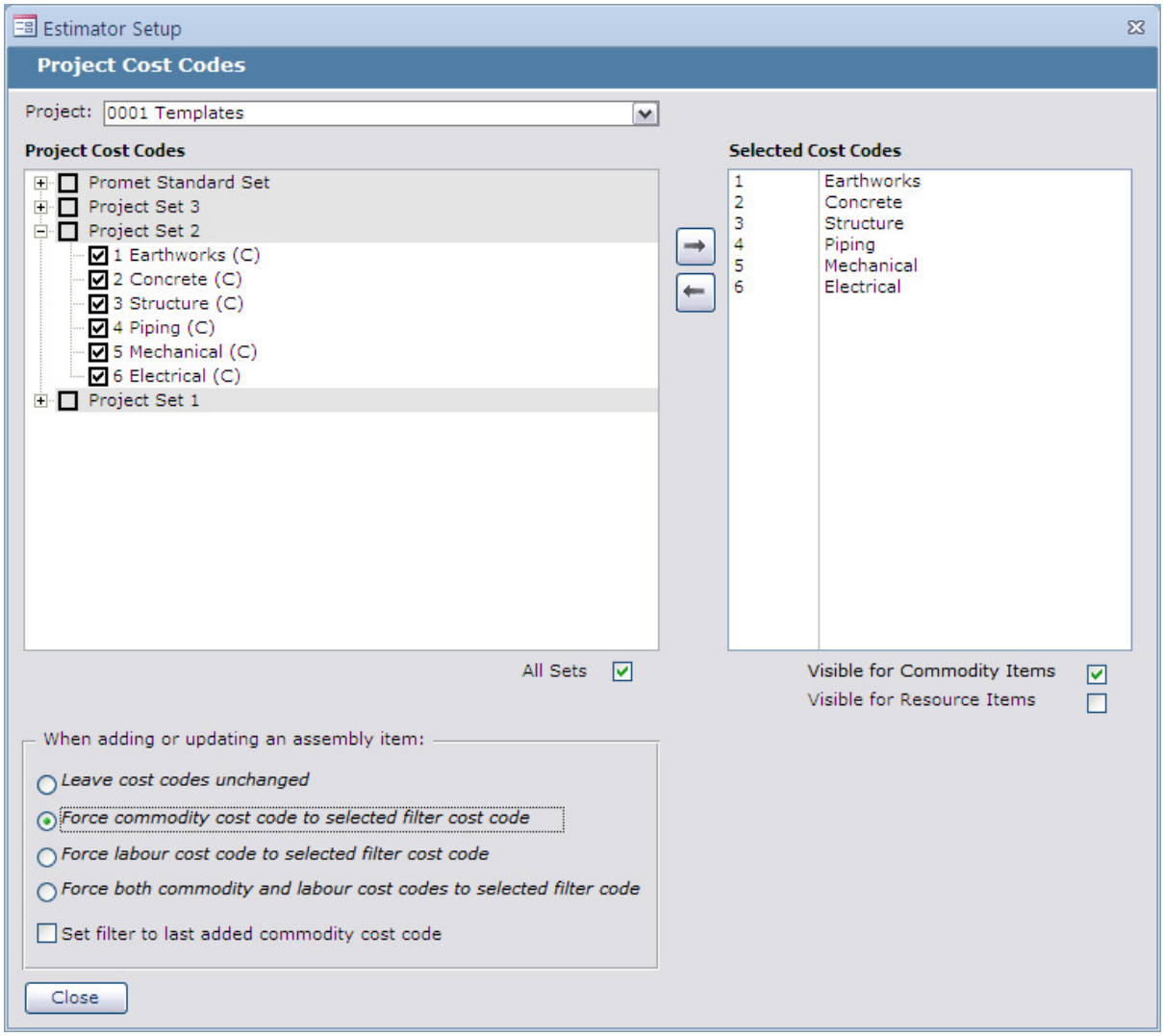


6 Modules

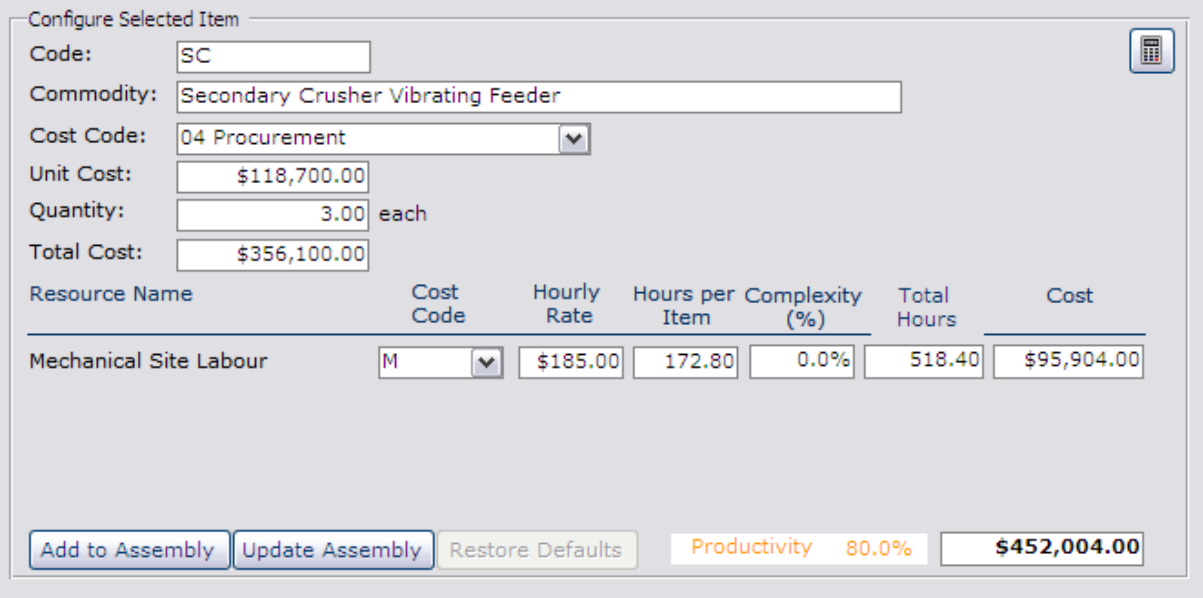
6.1 Adding or Modifying Module Assembly Items


Project Explorer
Module Assembly
Save
Mechanical
Project Closed
Locked
Cost Code
All Cost Codes (9)
04 Procurement (8)
W Transport (1)
Code
Item Description
Cost Code
Unit Cost
Item Qty
Item Cost
Labour Type
Rate
Cost Code
Labour Qty
Labour Cost
Line Item Cost
ZM Freight Factored W $662,502 1.00 $662,502 $662,502
CV CV-002 Secondary Crusher Feed Conveyor; 1200n 04 $3,102,855 1.00 $3,102,855 Mechanical Site Lab $185 M 1,390.8 $257,298 $3,360,153
CV CV-010 Secondary Crusher Product Conveyor; 12(04 $1,072,895 1.00 $1,072,895 Mechanical Site Lab $185 M 1,471.2 $272,172 $1,345,067
CR Secondary Cone Crusher; MP1000 04 $3,384,670 3.00 $10,154,010 Mechanical Site Lab $185 M 9,000.0 $1,665,000 $11,819,010
FL Secondary Crusher Dust Collector 04 $440,000 1.00 $440,000 Mechanical Site Lab $185 M 360.0 $66,600 $506,600
ZM Secondary Crusher Feed Conveyor MagSus unit 04 $59,035 1.00 $59,035 Mechanical Site Lab $185 M 24.0 $4,440 $63,475
CV Conveyor Components Weightometer 04 $22,414 1.00 $22,414 Mechanical Site Lab $185 M 36.0 $6,660 $29,074
CV Secondary Crusher Feed Shuttle; 1500mm wide, 04 $200,000 1.00 $200,000 Mechanical Site Lab $185 M 144.0 $26,640 $226,640
SC Secondary Crusher Vibrating Feeder 04 $118,700 3.00 $356,100 Mechanical Site Lab $185 M 432.0 $79,920 $436,020
Commodity
Resource
Select Item
Flanged Valve 40 mm Table D
Flanged Valve 40 mm Table E
Flow Control Valve
Knife Gate Valve
Knife Gate Valve Tubeline 100 mm
Knife Gate Valve Tubeline 150 mm
Knife Gate Valve Tubeline 200 mm
Knife Gate Valve Tubeline 250 mm
Knife Gate Valve Tubeline 300 mm
Knife Gate Valve Tubeline 350 mm
Knife Gate Valve Tubeline 400 mm
Knife Gate Valve Tubeline 50 mm
Knife Gate Valve Tubeline 500 mm
Knife Gate Valve Tubeline 80 mm
Generic
Related Items
Configure Selected Item
Code:
Commodity: Knife Gate Valve Tubeline 200 mm
Cost Code: 35-11 Valves
Unit Cost:
Length: 1.00 each
Total Cost:
Resource Name
Cost Code
Hourly Rate
Hours per Item
Complexity (%)
Total Hours
Cost
Mechanical Site Labour 31-01 $177.00 5.20 0.0% 5.20 $920.40
Electrical Site Labour 40-11 $177.00 2.00 0.0% 2.00 $354.00
Add to Assembly
Update Assembly
Restore Defaults
$1,274.40

6.2 Overriding Default Cost Codes



6.3 Displaying an Applied Productivity Factor



6.4 Expert System Functionality

The system can be configured to perform various expert system calculations. At present, expert system calculations are available for structural steel fabrication items.

Structural steel items are normally priced for procurement in cost per tonne. However, the length, typically in metres, must be specified for project costing purposes, and hence a cost per unit length must be calculated.

Cost per Unit Length = [(Cost per Unit Weight) / (Weight per Unit Length)] * Conversion Factor

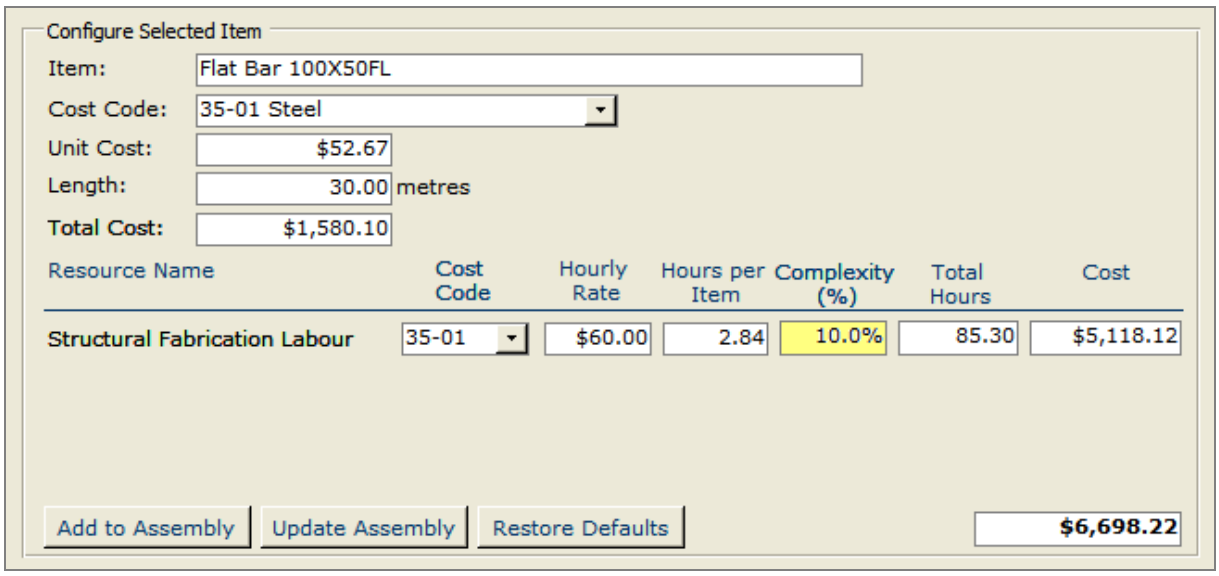
Eg cost per meter = (cost per tonne / kilograms per meter) * 1000

The calculation operates as follows. When new items are selected to add to a project, if they have labour of type 'Structural Fabrication Labour':

A additional form field to hold the cost per unit weight is displayed
This field is populated with the cost per unit weight (tonnes)
The cost per unit length (meters) is calculated according to the above calculation, using the item's 'weight per unit length' dimension.
The unit cost field is populated with the results of this calculation
A message is displayed advising the user that this calculation was performed.

6.5 Apply a Complexity Factor

A Complexity Factor (or Difficulty Factor) can be applied to any line item resource.



This value is entered as a percentage and must be greater than 0. It is applied to the hours per item as follows:

[Hours per Item] ---> [Hours Per Item] * (1 + [Complexity Factor])

The [Total Hours] and the [Resource Cost] values are then updated accordingly.

7 Project Explorer Functions

7.1 Copy and Paste Project, Version or WBS

Copy

Paste

Users can copy any part of the project structure, including child elements and estimate items, for any project, to the same level of any other project, or the same project.

To copy first click on the source project element to copy. Then click on the copy button on the main toolbar. A message box will then appear showing the project structure element to copy. Click OK to close the message box.

Click on the destination project element where the copied element is to be inserted and click the paste button. Provided the source and destination levels are the same the element will be copied immediately after the insert point.

8 Cost Codes

8.1 [1]System Supplied Knowledgebase Construction Engineering Cost Code Set

10-01 Medical
10-02 Accomodation
10-03 Travel
10-04 Petty Cash
10-05 Training
10-06 Personal Protective Equipment
10-07 Fitness for Work
20-01 Project Managers
20-02 Short Term Employees
20-03 QA Support
20-04 HSE Health/Safety and Environment
20-05 Administration Support
20-06 Project Engineers
20-07 Project Coordinators
25-01 Workshop Supervisors
26-01 Labour Employee
26-02 Labour Hire
26-03 Expeditors
26-04 Inductions
27-01 Consumables
27-02 Equipment Hire
27-03 Cranage
30-01 Construction Managers
30-02 Site Supervisor
30-03 QA Support
30-04 HSE Health/Safety & Environment
30-05 Site Administrator
30-06 Project Engineers
30-07 Project Coordinators
31-01 Labour Employee
31-02 Labour Hire
31-03 Expeditors
31-04 Inductions
32-01 Consumables
32-02 Plant Hire

[1] Review cost codes for client for installing pre-supplied

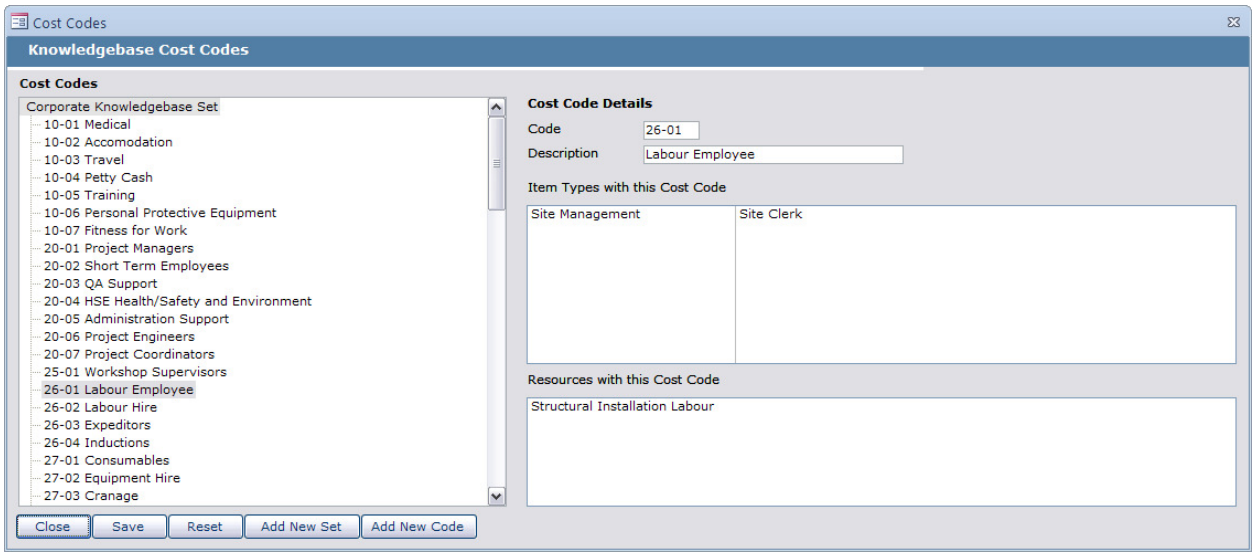
32-03 Capital Purchases
32-04 Vehicle Hire
32-90 Variation
35-01 Steel
35-02 Stainless Steel
35-03 Exotics
35-04 Piping
35-05 Fasteners/Studbolts
35-06 Timber/Plastics
35-07 Painting Materials
35-08 Grating/Stair Treads Materials
35-09 Handrail Materials
35-10 Gaskets
35-11 Valves
40-01 Mechanical
40-02 Machining
40-03 Painting
40-04 Local Transport
40-05 Pressing
40-06 Rolling
40-07 Sub Contracted Fabrication
40-08 Sheetmetal
40-09 Roofing
40-10 Insulation
40-11 Electrical Contractors
40-12 Civil Contractors
40-13 Building Contractors
40-14 NDT-Non Destructive Testing
40-15 Detailed Drafting
40-16 Design Services
40-17 Rubber Lining
40-18 Galvanising
40-19 Transport to Site
40-20 Material Processing
50-01 Bank Guarantee/Bonds
50-02 Insurance
50-03 Contingency
50-04 Legal
55-01 Communications
55-02 Telephone

55-03 Printing & Stationery
55-04 Warranty Provision
60-01 Airfares
60-02 Hire-Labour O/Seas
60-03 Bounses-O/Seas
60-04 Hire of Plant & Equipment
60-05 Materials To Be Incorp In Job
60-06 Materials for Repairs & Maintenance
60-07 Taxes-Company
60-08 Taxes-PAYG
65-01 Month End Accruals
99-01 Margin
99-03 Contingency
99-04 Over Heads Recovery
99-90 Variation

8.2 Changing the Supplied Knowledgebase Cost Code Set

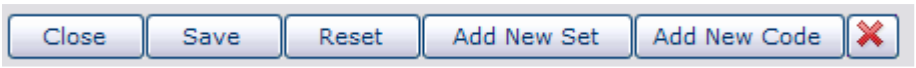
Only a user with administration rights can change the knowledgebase cost code set and structure.

To change the pre-supplied cost codes first select Project Cost Codes, then select any cost code in the list that appears, then select the Knowledgebase Cost Codes button at the bottom left of the screen.



If the cost code has already been assigned to existing knowledgebase items it cannot be deleted until those items and item types have been deleted.

If the cost code can be deleted a delete button will appear in the button bar at the bottom of the screen.



8.3 Project Cost Code Structures

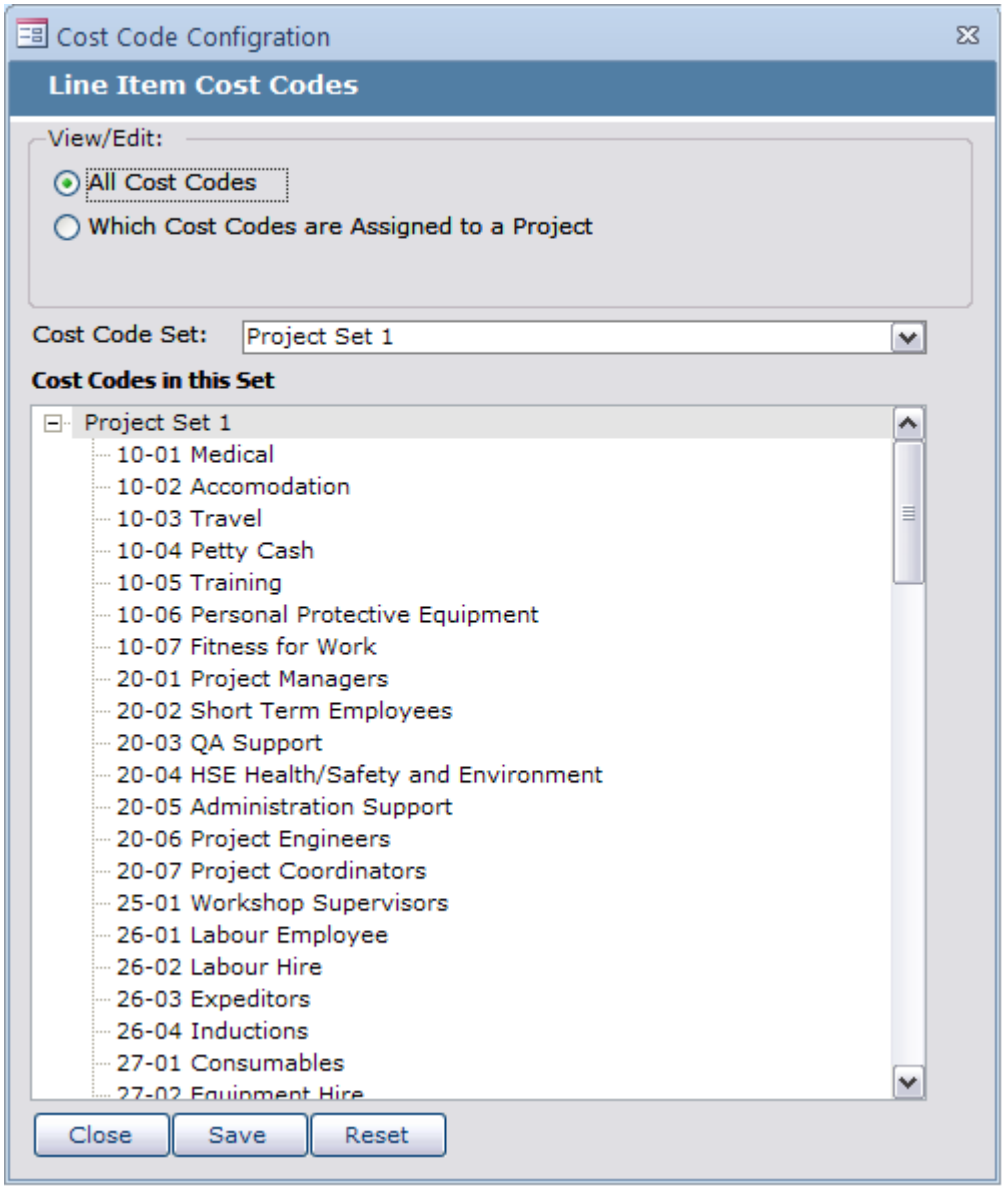
The system provides for

The system is supplied with a comprehensive cost code set, which is used with pre-configured knowledgebase packages and items. These cost codes are used by default in associated dropdown lists and reports, unless a different set is specified as the default set.

<insert reference or link to default cost code spreadsheet>

These codes are not user configurable, even by a system administrator.

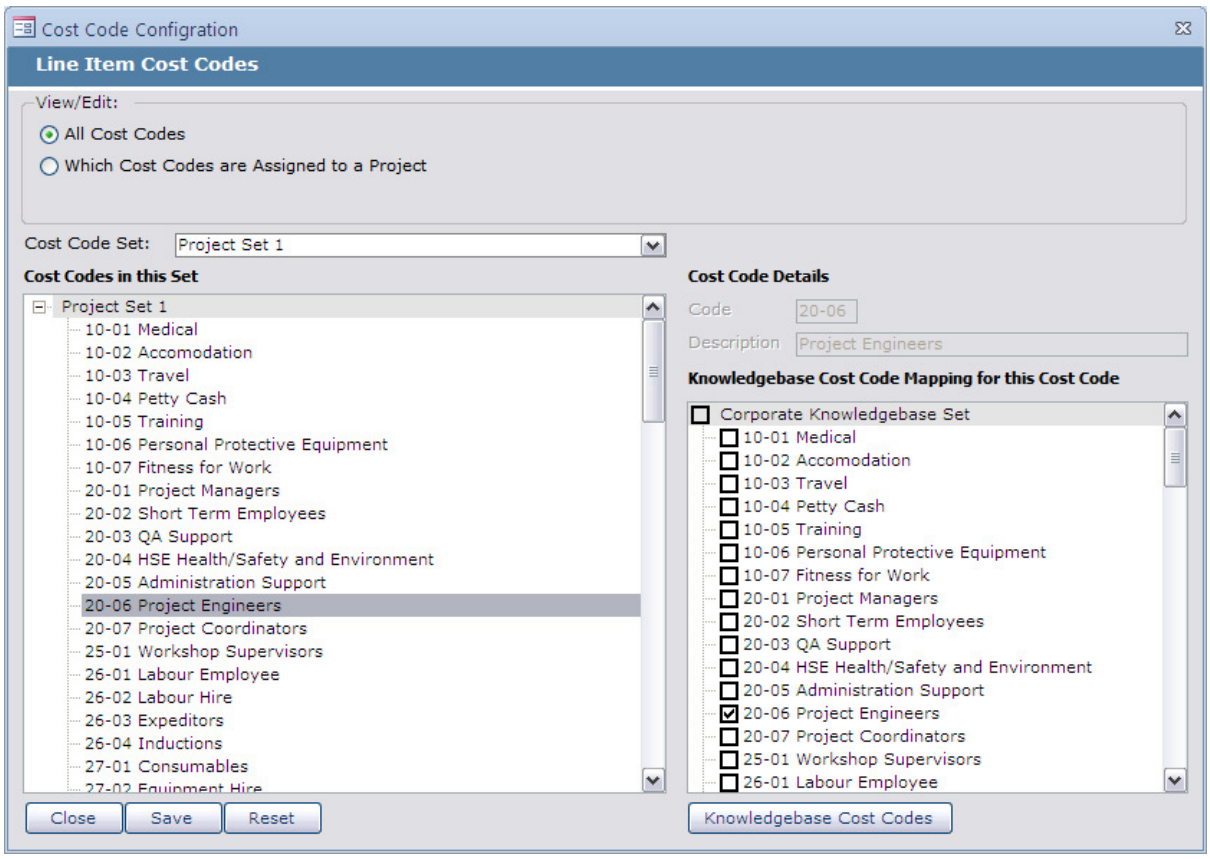
Default Cost Code Set



The default global cost code set for projects is the same as the knowledgebase cost code set when the system is first supplied. This cost code set can be freely modified by users with administration rights.

8.4 Creating and Modifying Cost Codes and Sets

Cost Code Sets, Cost Code Sub-sets, and individual Cost Codes can be added, changed or deleted by selecting the 'Project Cost Codes' button on the main switchboard.



9 Global Change

The Global Change function can be applied to any level of the work breakdown structure (WBS) and will cause data for sub-ordinate line items, containing selected commodity(s) or resource(s), to be updated.

A note will be added to the notebook after each successful global change transaction.

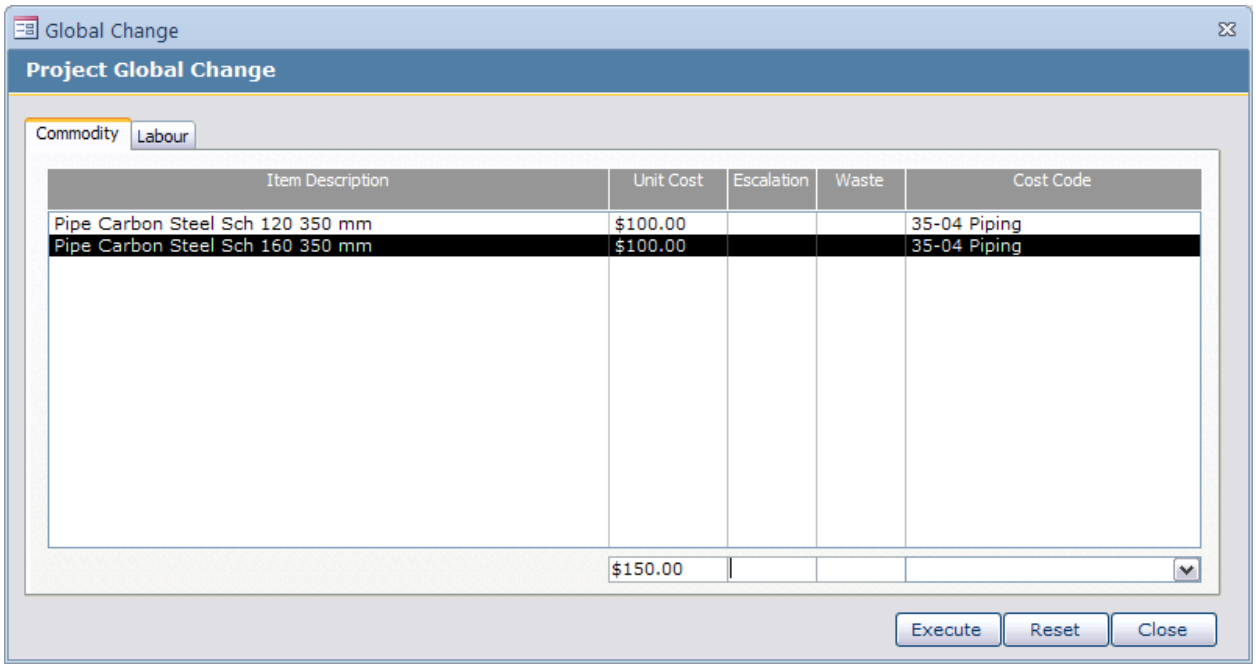
The Global Change function allows the following:

- Commodity Cost
- Commodity Cost Escalation Factor
- Commodity Waste Factor
- Commodity Cost Code
- Resource Rate
- Resource Productivity
- Resource Cost Code

9.1 Commodity Settings

9.1.1 Commodity Cost

The commodity cost for one or more items can be set by selecting the items, entering the revised cost, and clicking execute as shown below.

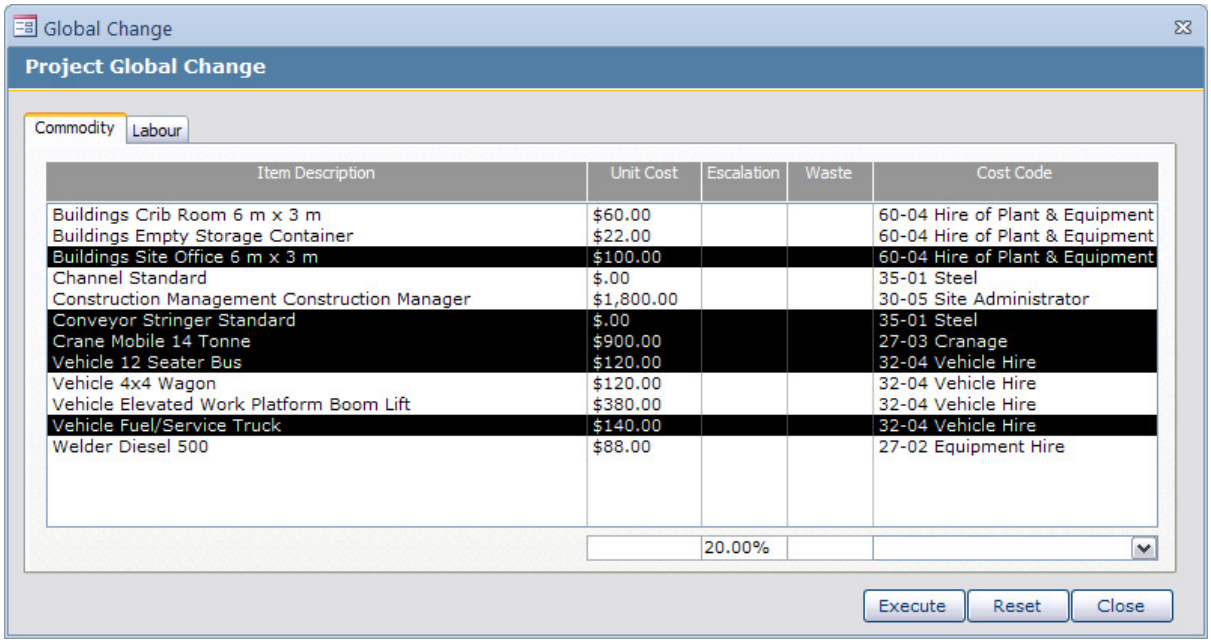


When the commodity cost is updated the corresponding line item cost will also be updated accordingly.

[Commodity Cost] --> [Revised Commodity Cost]

[Line Item Cost] --> [Resource Cost] + [Revised Commodity Cost]

9.1.2 Commodity Cost Escalation Factor



(Note that in this example multiple commodities have been selected. Similarly multiple lines may be selected for changing any other setting globally.)

The escalation value is entered as a percentage greater than zero.

Applying a commodity cost escalation factor causes the associated cost per unit quantity (and the commodity cost) to increased by an amount determined by the escalation factor.

Since an escalation factor may have previously been applied, any previous escalation factor must first be reversed as follows.

[Commodity Unit Cost] -->
([Commodity Unit Cost] / (1 + [Existing Escalation Factor])
* (1 + [Revised Escalation Factor])

[Commodity Cost] -->
([Commodity Cost] / (1 + [Existing Escalation Factor])
* (1 + [Revised Escalation Factor])

[Line Item Cost] --> [Resource Cost] + [Revised Commodity Cost]

9.1.3 Commodity Waste Factor

The waste factor works in a similar way to the 'Commodity Cost Escalatation' except that it operates on the commodity quantity.

Since a waste factor may have previously been applied, any previous waste factor must first be reversed as follows.

[Commodity Quantity] -->
([Commodity Quantity] / (1 + [Existing Waste Factor])
* (1 + [Revised Waste Factor])

[Commodity Cost] -->
([Commodity Cost] / (1 + [Existing Waste Factor])
* (1 + [Revised Waste Factor])

[Line Item Cost] -->
[Resource Cost] + [Revised Commodity Cost]

Also the labour unit quantity must change so that the overall labour quantity and cost are unchanged for each labour resource.

[Resource Unit Quantity] -->
[Resource Quantity] / [Revised Commodity Quantity]

Commodity Cost Code

9.2 Resource Settings

9.2.1 Resource Rate

The rate for any labour resource can be globally changed. When the rate is changed the corresponding resource cost is changed also.

[Resource Rate] --> [Revised Resource Rate]
[Resource Cost] -->
[Commodity Quantity]*[Resource Unit Quantity]
* [Revised Resource Rate]
[Line Item Cost] -->
[Revised Resource Cost] + [Commodity Cost]

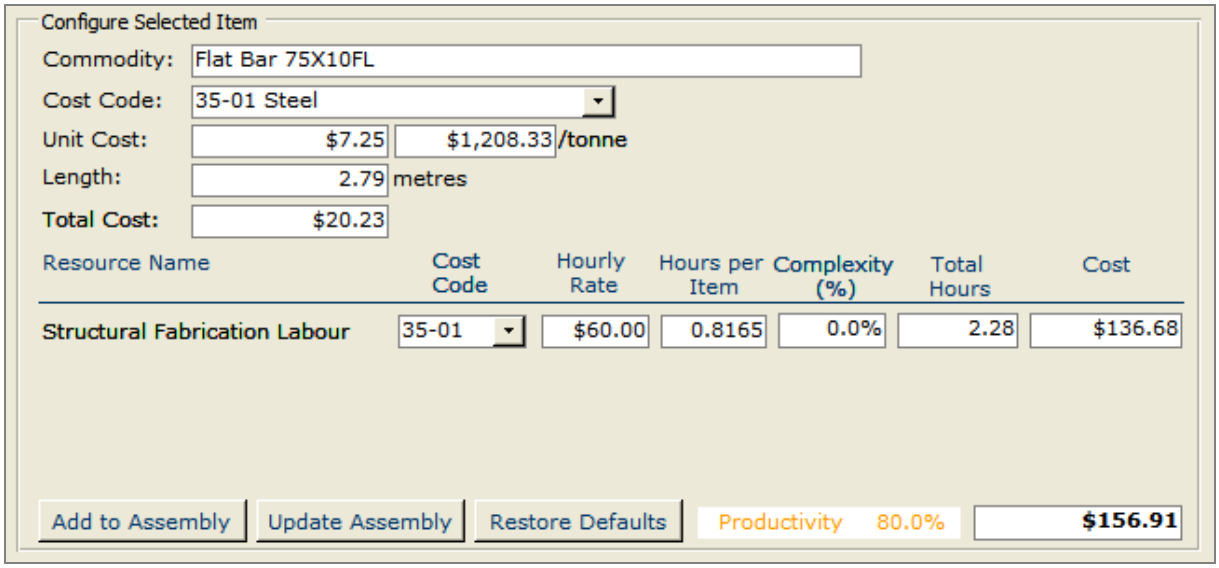
9.2.2 Resource Productivity Factor

A Productivity Factor can be entered for particular labour resource types. Normally, this value is in the range 0 – 100%, and is a measure of how expeditiously work is to be performed. For example, in a hot environment workers are likely to be less productive than in an optimum environment. Thus, labour hours need to be increased to account for this loss of productivity.

[Resource Unit Quantity] -->
([Existing Resource Unit Quantity]
/ (2 – [Existing Productivity Factor]))
* (2 - [Revised Productivity Factor])

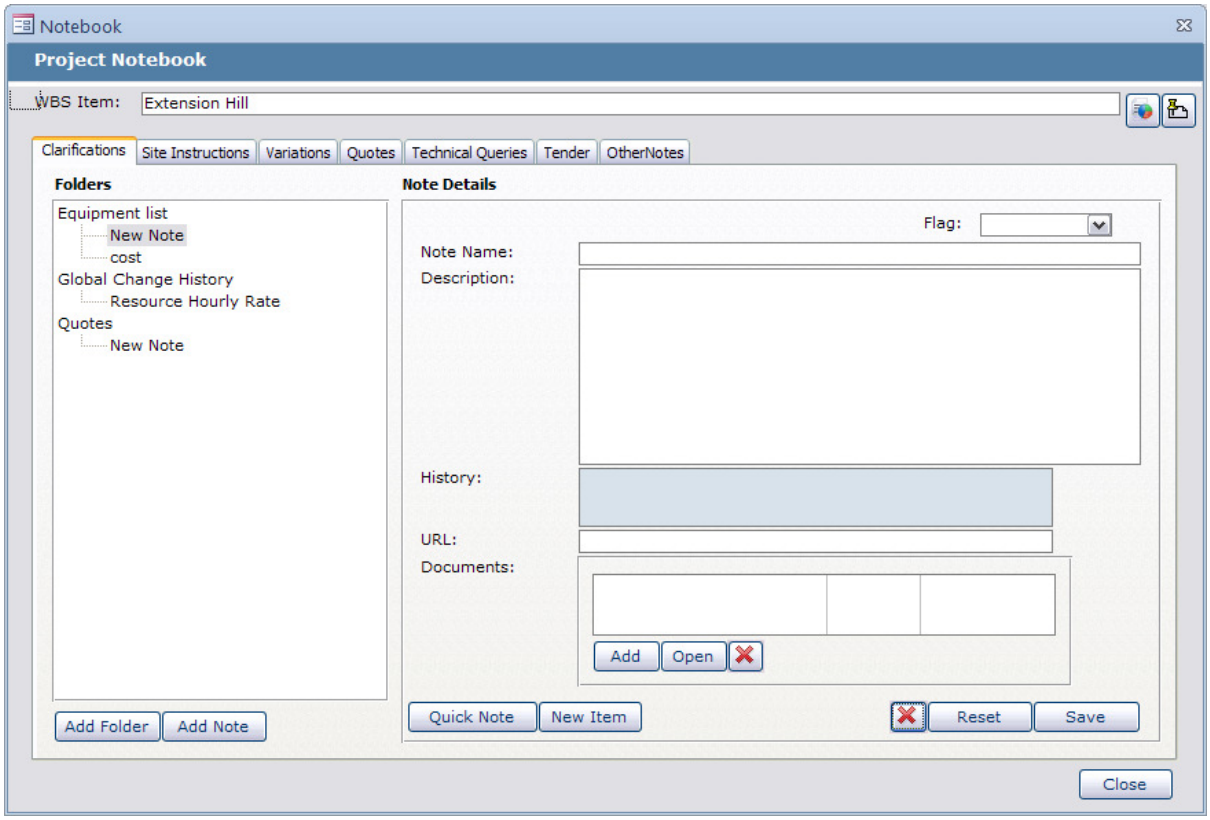
[Resource Quanity] --> [Commodity Quantity]
* [Revised Resource Unit Quantity]
[Resource Cost] --> [Commodity Quantity] * [Resource Rate]
* [Revised Resource Unit Quantity]
[Line Item Cost] -->
[Revised Resource Cost] + [Commodity Cost]

9.2.3 Resource Cost Code



10 Project Notebook

The Project Notebook allows users to add textual notes and upload and save documents to any level of a project.



10.1 Topics

The notebook is first divided into topics. If the system has been set up for Engineering Constructiion this topics will normally be as follows:

- Clarifications
- Site Instructions
- Variations
- Quotes
- Technical Queries
- Tender
- Other Notes

These seven (7) topics may be customised and have no particular meaning other than to organise notes and documents into topic groups. There can be as few as one topic, or as many topics that can phyically be displayed on the tab bar.

10.2 Folders

The user can create one or more folders, within any topic. Note, however, that there cannot be folders within folders.

Use the 'Add Folder' button to create a new folder within a topic.

10.3 Notes

One or more notes can be created in any folder.

A note consists of:

- Name – A title for the note
- Description – Text of the note
- Optional Flag – Follow up, Important, Critical
- History – A list of when and by whom the note was created or modified.
- URL – An optional reference to a related web site or linked document.

10.4 Attached Documents

Any note can have one or more document attachments, which are document files that are uploaded to the FOCUS database.

To attach a new document to a note click the 'Add' button.

Note that documents are uploaded and saved with out the need for clicking the 'Save' button. To delete a document click on the document name and then click 'X'.

To open any document, click on the document name and then click on 'Open'.

? What does button 'New Item ' do.

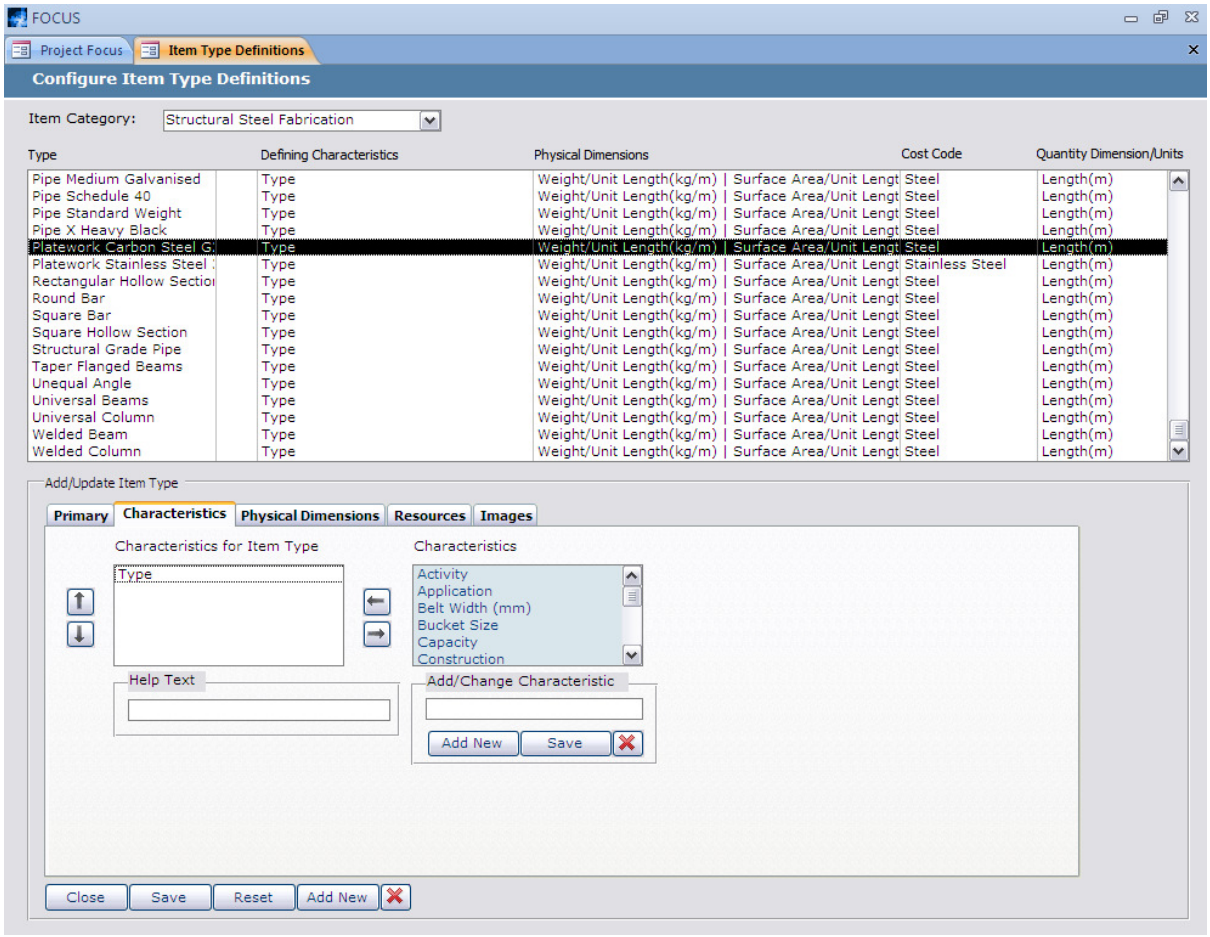
11 Controlling User Access to Project Nodes

12 The Knowledgebase

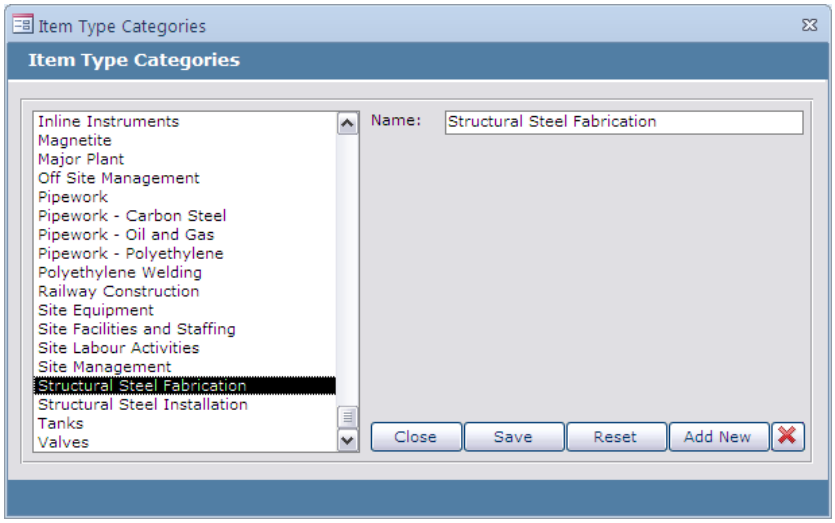
Item Types are commodity (consumable/equipment) types that define the parameters for an associated set of items.

12.1 Item Type Configuration

To add or change item types select 'Configure Item Types' from the main menu.



Item Types are themselves grouped into categories. New categories can be created or existing ones changed by double clicking on the 'Category' text box to display the pop-up form below.

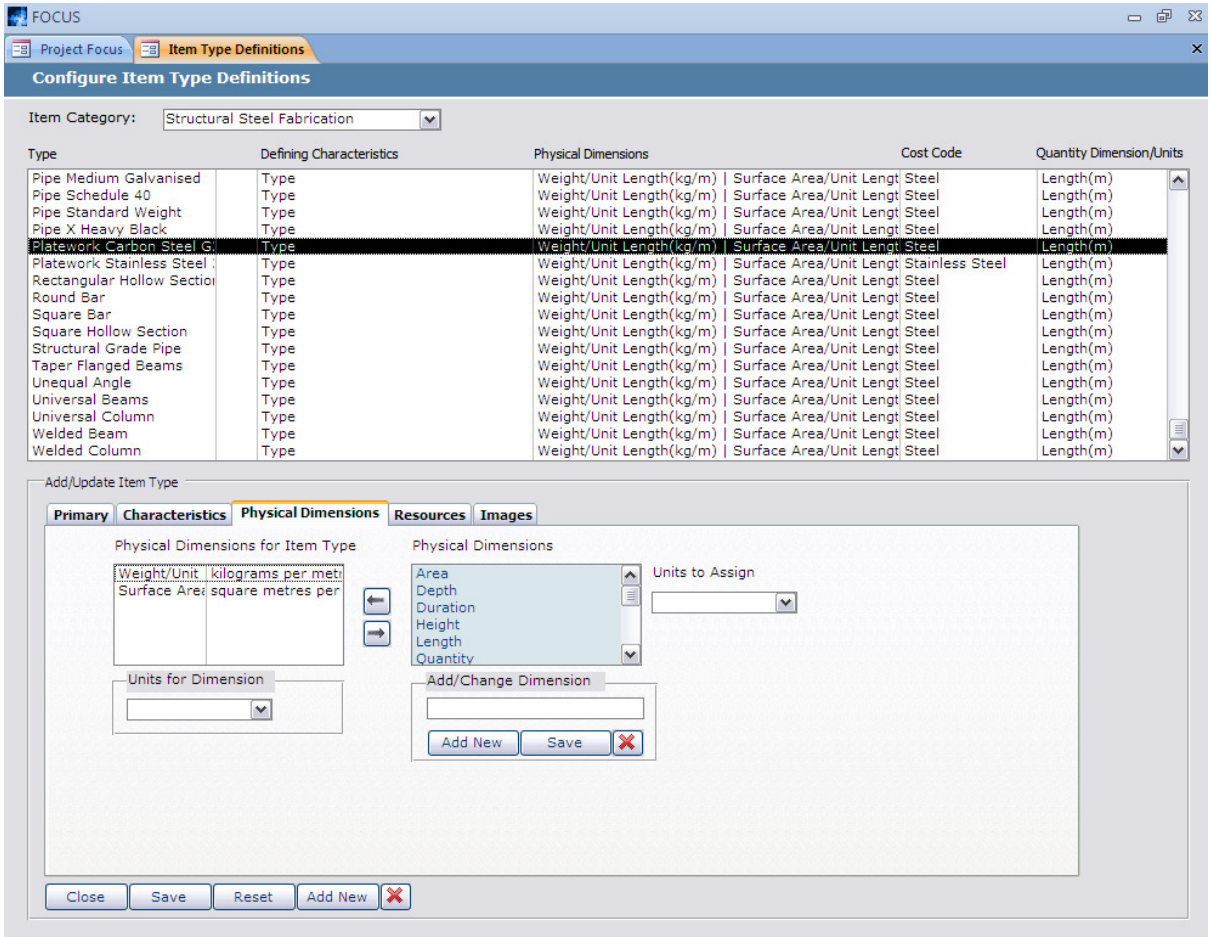


Item Type attributes are themselves grouped into

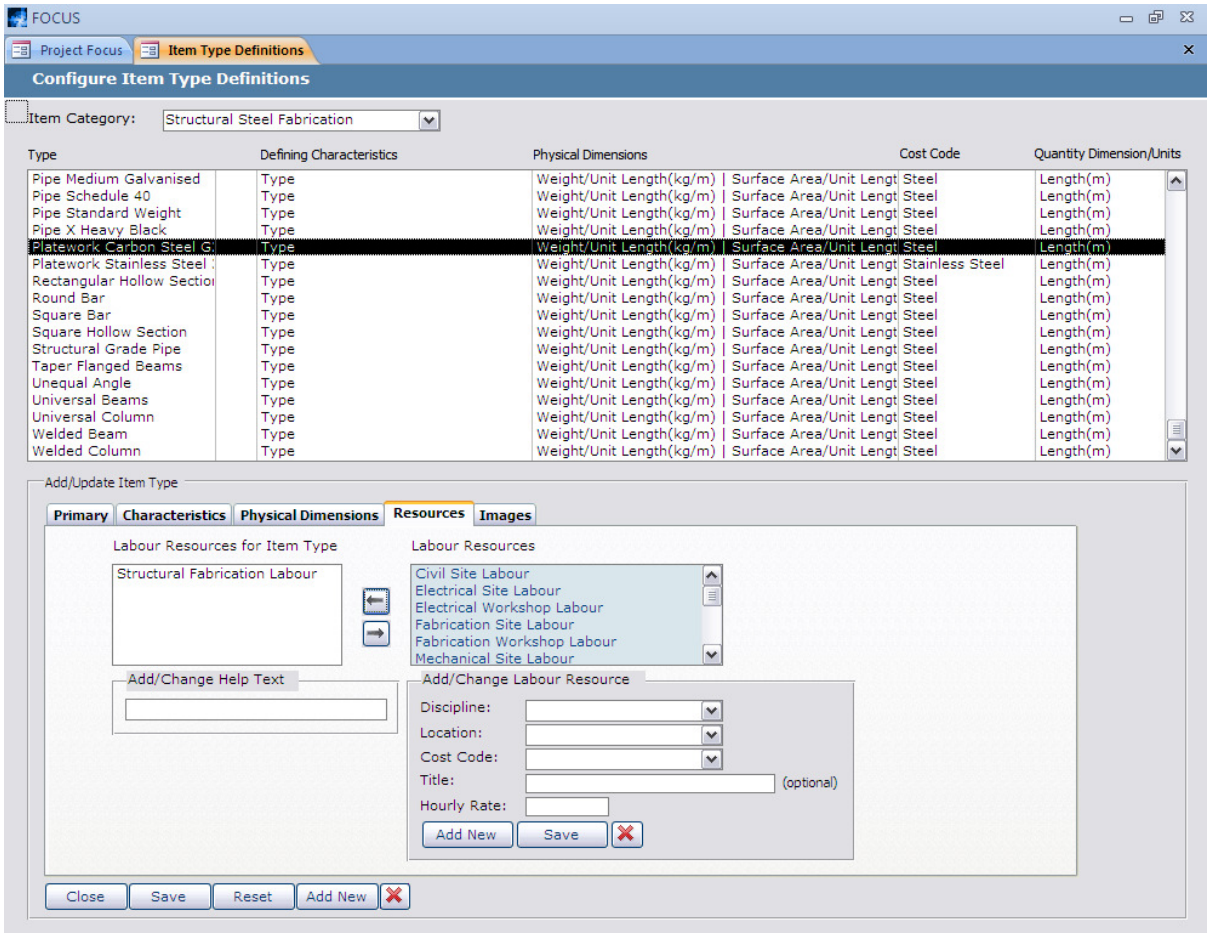
Characteristics –

Item Type naming - <Item Type Name> <1st Characteristic> <2nd Characteristic> . . .

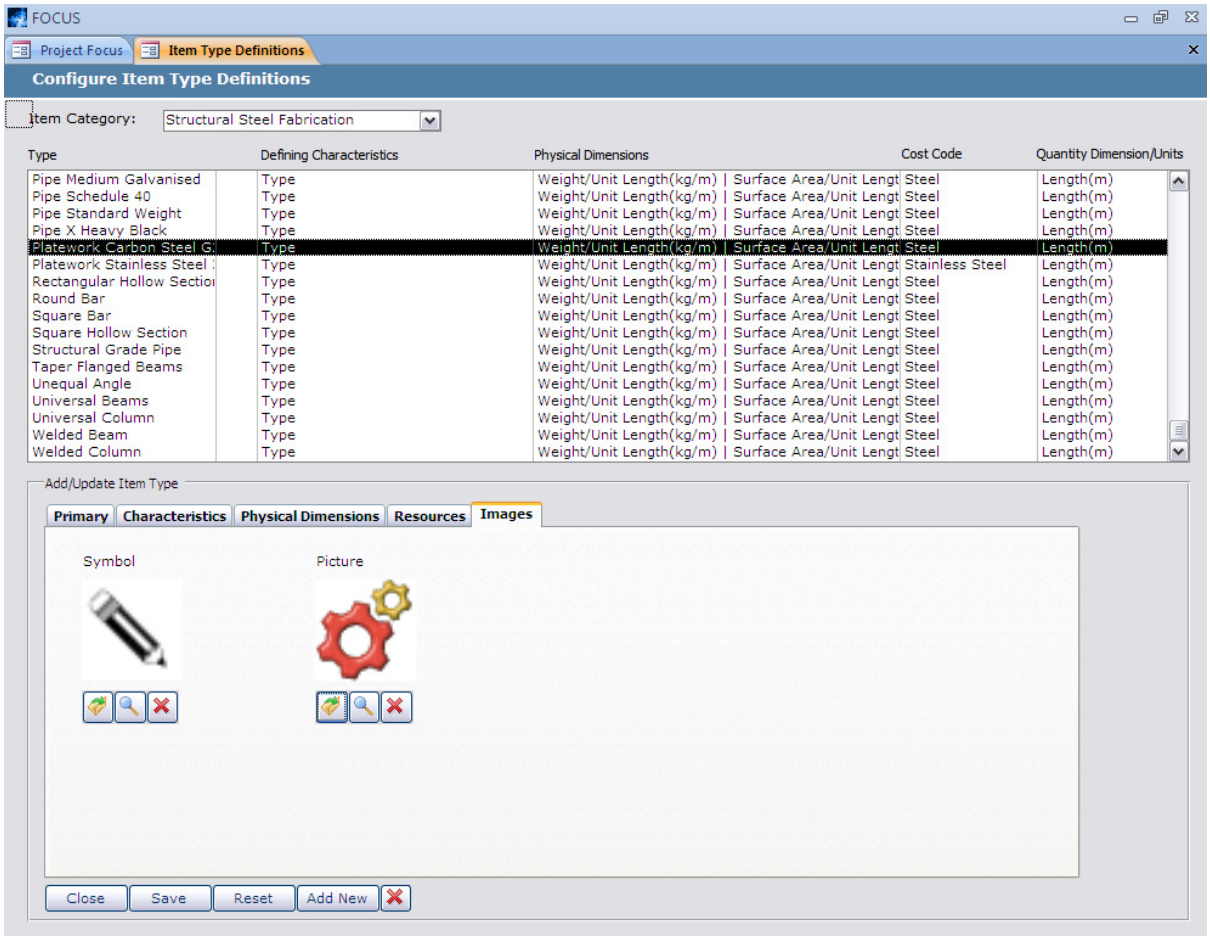
12.1.1 Physical Dimensions



12.1.2 Labour Types



12.1.3 Images



12.2 Item Configuration

12.3

13 Reporting